



# Illinois Department of Transportation

## Memorandum

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To: DIRECTORS, DEPUTY DIRECTORS, AND BUREAU CHIEFS  
From: Dianna L. Taylor  
Bureau Chief of Personnel Management  
Subject: Technical Vacancy  
Date: April 18, 2016

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Attached are the Position Summary Sheet and Position Description for the vacant technical position listed below. Please post this vacancy announcement April 20, 2016 in the designated areas.

The deadline for applicants to submit their names for consideration is **4:30 p.m.** on **Tuesday, May 3, 2016**. Applicants will not be accepted after that time and date.

**NOTE: Applications will be accepted from qualified permanent DOT employees only.**

All applicants will receive a position description for the position they are applying for. If you have any questions, please contact Jennifer Sunderland or Denise Hamilton at 217/782-5594.

CE III                      Traffic Signal Systems Engineer  
Region 2/District 2/Operations  
Highways  
Dixon

Attachments  
40725

Technical Applications (PM 1080) **must be received** by the Bureau of Personnel Management, Room 113, 2300 South Dirksen Parkway, Springfield, IL 62764 (Fax# 217/557-3134) by **Tuesday, May 3, 2016, 4:30 p.m.** Please include address, daytime phone and position for which applying if not already listed on application. Applicants will be notified in writing to schedule interviews.

**NOTE: Applications will be accepted from qualified permanent DOT employees only.**



**Illinois Department  
of Transportation**

An Equal Opportunity Employer

## Position Summary Sheet

**Classification:** Civil Engineer III

**Salary Range:** \$5,320 - \$9,000

**Position Title:** Traffic Signal Systems Engineer

**Union Position:** ☒ Yes ☐ No

**Position Number:** PW113-23-52-507-40-01

**IPR#:** 40725

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### Office/Central Bureau/District/Work Address:

Division of Highways / Region 2 / District 2 / Bureau of Operations / Dixon, IL

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### Description Of Duties:

This position is accountable for the safe and efficient operation of the district's traffic signal system interconnection. Participation in the available training provides the advanced level of expertise necessary to ensure in-house signal coordination and timing, fail safe protection, consultant assistance, and timely and economical installation and alteration of complex interconnected traffic signal systems for the counties of the District. Also facilitates proper maintenance of department traffic signals by municipalities.

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### Special Qualifications:

***The following criteria is required:***

- Four year degree from an ABET accredited college or Engineer Intern license in Illinois
- Valid driver's license

***The following criteria is desired:***

- Four years in the practice of civil engineering of which at least one year should be in the particular area of highway engineering
- Working knowledge of Microsoft Office applications such as Word, Excel, and Access
- Thorough knowledge of the principles and practices of civil engineering
- Ability to maintain harmonious relationships with employees, agency officials and the general public
- Strong oral and written communication skills

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### Shift/Remarks:

8:00 am – 4:30 pm / Monday – Friday

**\*THIS POSITION IS COVERED UNDER THE REVOLVING DOOR PROHIBITION (RDP) POLICY.**

**ILLINOIS DEPARTMENT OF TRANSPORTATION  
POSITION DESCRIPTION**

<b>DATE:</b>	February 16, 2012	<b>POSITION:</b>	Traffic Signal Systems Engineer
<b>APPROVED BY:</b>	<u>Eric Therkildsen</u>	<b>OFFICE/DIVISION:</b>	Region 2 / District 2 / Operations
<b>CODE:</b>	PW113-23-52-507-40-01	<b>REPORTS TO:</b>	Design & Planning Engineer

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***Position Purpose***

This position is accountable for the safe and efficient operation of all of the district's traffic signal system interconnection. Participation in the available training provides the advanced level of expertise necessary to ensure in-house signal coordination and timing, fail-safe protection, consultant assistance, and timely and economical installation and alteration of complex interconnected traffic signal systems for the counties of the District. Also, facilitates proper maintenance of department traffic signals by municipalities.

***Dimensions***

Geographical Area:	10 counties
Existing Traffic Signals:	500
Interconnected Traffic/Rail Signals:	7
Traffic Signal Systems:	40
Training:	3± courses and sophisticated signal equipment workshops

***Nature and Scope***

This position reports to the Design and Planning Engineer, as do the Traffic, Construction, and Systems Engineer; the Traffic Plans and Contracts Technician; the Field Technician; and the Roadway Plans and Contracts Technician. There are no subordinates reporting to this position.

The environment for this position centers on the Department's inter-related traffic/railroad activities. The incumbent ensures proper fail-safe protection for complex interconnected signal systems throughout the various counties within the district. The incumbent ensures compliance with state and federal regulations for traffic/railroad interconnected signal systems. He/She reviews Signal Coordination and Timing (SCAT) consultant's work, coordinates signal system timing in-house, and provides assistance to local agencies to ensure their systems are maintained and utilized.

Typical problems include participating in complex on-going training to maintain and keep abreast of the latest signal technology; providing liaison with railroads, Illinois Commerce Commission (ICC), and local governments; and serving as the District's interconnected signal systems expert. The major challenge of this position is to maintain complex systems standards within constraints of sound engineering judgment.

The incumbent is personally accountable for the safe operation of all the district's interconnected traffic/railroad signal warning systems. He/She provides the expertise needed to operate these complex systems; develops or updates all timing plans for those projects that are not assigned to consultants; and contributes to design specifications for all interconnected traffic/railroad signal systems. The incumbent provides direction for Signal Design consultants and assists in development of signaling concepts with other agencies. He/She personally reviews SCAT consultant's work; monitors traffic conditions and adjusts traffic signal timings; and provides liaison with the railroads, ICC, and local governments. The incumbent participates in the Advanced Transportation Research and Engineering Laboratory (ATREL) at Rantoul – as a continuing education experience – to test equipment, evaluate the latest technology, revise specifications, and research needed

improvements. In addition, this position assists with operating, monitoring, and programming the various traffic control equipment in the district and the development and implementation of timing plans for isolated intersections and systems. Regular inspections and monitoring of vehicle traffic signals interconnected with railroad signals is required to ensure reliable operations. The incumbent, when necessary, will assist with the inspection of construction for various traffic projects.

The incumbent functions with minimal supervision and is granted wide latitude in accomplishing assigned duties referring only the most serious or unusual to the Design and Planning Engineer for resolution. He/She must operate within the guidelines set forth by the Manual of Uniform Traffic Control Devices, the Standard Specifications for Traffic Control Devices, the Bureau of Operations Policy and Procedures Manual, the Construction Manual, and the Standard Specifications for Road and Bridge Construction. He/She is constrained by district, departmental, and federal policies, as well as plans and specifications. The incumbent is afforded the latitude to make justifiable revisions during a project due to unforeseen conditions.

The incumbent maintains internal contacts with the District Bureau of Project Implementation to ensure that simple to complex reports, pay items, equipment, and material are submitted, state inspected, and/or approved; the Bureau of Program Development to ensure that simple to complex plans are completed to meet letting dates, to obtain traffic data, and to view location studies; and the Central Bureau of Operations Systems Engineer. Outside contacts are maintained with the Federal Highway Administration, University of Illinois personnel for training purposes, the ICC, local governments, consultants, and contractors.

The effectiveness of this position may be measured by the incumbent's knowledge and application of technical materials; quality and timeliness of traffic/railroad signal systems installation, update, and maintenance; and the correct resolution of problems that arise in the field.

### **Principal Accountabilities**

1. Provides in-house expertise needed for the safe and efficient operation of all the district's complex interconnected traffic/railroad signal system.
2. Develops and/or updates simple to complex timing plans for all in-house projects and contributes to design specifications for all district interactive traffic/railroad signal systems.
3. Reviews SCAT consultant's work and provides direction for Signal Design consultants.
4. Provides liaison with railroads, FHWA, ICC, and local governments.
5. Produce plans and contracts for weigh scale repairs.
6. Represent Operations Bureau on Value Engineering Team
7. Perform speed study and various traffic investigations.
8. Improve performance of all traffic signals on Department roadways through periodic maintenance inspections, managing signal controller database, and coordinating repairs through local agencies.
9. Performs duties in compliance with departmental safety rules. Performs all duties in a manner conducive to the fair and equitable treatment of all employees.